NETWORK ENGINEER SERIES

Code No.	Class Title	Occ. Area	Work Area	Prob. Period	Effective Date
1387	Network Engineer I	02	734	6 mo.	12/16/98
1388	Network Engineer II	02	734	6 mo.	12/16/98
1389	Network Engineer III	01	734	6 mo.	12/16/98
1390	Network Engineer IV	01	734	6 mo.	12/16/98
1391	Network Engineer V	01	734	6 mo.	12/16/98

Promotional Line: 233

Series Narrative

Positions assigned to this series have the responsibility of supporting the physical and logical infrastructure of the campus network, remote access systems, and Internet connectivity and related services for the entire organization. This includes design, installation, maintenance, and evolution of these systems. Systems that support activities related to network management, documentation, and billing also fall within the scope of this series. This series is broader in scope than series that focus on *wide area networking*, such as the Network Specialist series, and includes core network development, dial-up networking and access technologies.

This series provides for a progression of responsibility from positions assigned routine tasks to those responsible for design and long-range planning. Although individuals within this series predominantly interact with classes supporting end-user services, the focus of this series is on supporting the central infrastructure of the organization.

DESCRIPTIONS OF LEVELS OF WORK

Level I: Network Engineer I 1387

Employees at this level work under close supervision of a designated supervisor and are entry-level specialists who receive training on specific networking products. They receive direct supervision on issues relating to procedures and standards relevant to the products for which they are responsible and the operating environment in which they function.

A Network Engineer I typically –

1. supports assigned networking products by maintaining appropriate levels of hardware and software as dictated by the environment in which they operate (e.g., router microcode level and image type)

2. installs and configures products for which responsible

3. assists other engineers in troubleshooting problems relating to products for which responsible

4. monitors data relating to the status of products within the network (e.g., circuit utilization)

5. performs other related duties as assigned

Level II: Network Engineer II 1388

Employees at this level are experienced specialists who work under general supervision of a designated supervisor and are responsible for maintaining groups of networking products as part of the network architecture. They serve as a resource to internal and external staff on these products and how they integrate into the organizational network model.

A Network Engineer II typically –

1. supports product suites that are composed of multiple networking hardware and software products (e.g., all token ring hubs)

2. installs and tests networking hardware and software products for which responsible

3. develops and maintains network documentation that describes physical and logical integration as well as implementation and management standards

4. provides assistance to other engineers in troubleshooting problems relating to products for which responsible

5. performs research in support of the architecture within which these products are implemented

6. assists campus technical staff with problems or configuration issues relating to products for which responsible (e.g., responding to and closing help desk tickets)

7. provides training on specific products for which responsible to other employees throughout this series

8. performs duties outlined in Level I of this series as required

9. performs other related duties as assigned

Level III: Network Engineer III 1389

Employees at this level work under general supervision of a designated supervisor and are experienced generalists who are familiar with multiple product sets. They perform preliminary network design and optimization plans, and resolve moderately complex problems.

A Network Engineer III typically –

1. supports systems that are composed of multiple product suites (e.g., all desktop access products)

2. tests and develops integration of multiple networking hardware and software products and architectures

3. performs research in support of the architecture that the network infrastructure products are implemented

4. coordinates the troubleshooting efforts and resolution of problems relating to the product suites for which responsible

5. reviews generated reports regarding network deficiencies and faults and informs higher-level engineers

6. may perform lower level duties within this series as required

7. performs other related duties as assigned

Level IV: Network Engineer IV 1390

Employees at this level work under administrative supervision and are advanced generalists who are familiar with a broad range of network architectures and product solutions available on the market. They are responsible for project management and the solution of complex problems. They may also coordinate the work of multiple lower-level specialists or generalists.

A Network Engineer IV typically –

1. supports a major cross-section of networking systems (e.g., remote access systems architecture, network core, building and departmental networks, wide area connectivity)

2. designs and implements procedures for optimizing network software and hardware products relating to defined responsibilities

3. performs research on various technologies in order to facilitate active projects

4. defines needs to higher-level employees of this series by interpreting reports that monitor network resource consumption

5. may perform duties outlined in lower levels of this series if required

6. performs other related duties as assigned

Level V: Network Engineer V 1391

Employees at this level are expert technologists who have extensive knowledge of network architectures and design criteria and provide direction and coordination to lower level engineers within this series. They work under administrative direction, participating in long-range planning and managing projects at their own discretion.

A Network Engineer V typically –

1. performs research in support of planning and network design criteria

2. advises designated supervisor regarding the effects of design implementation and changes on overall network operations and efficiencies

3. makes recommendations to designated supervisor regarding the evolution of the overall network architecture

4. coordinates activities in support of active projects

5. performs other related duties as assigned

MINIMUM ACCEPTABLE QUALIFICATIONS REQUIRED FOR ENTRY INTO

Level I: Network Engineer I 1387

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Any one or any combination of the following that totals three academic years:

   (a) college/vocational/technical training that included six hours in network infrastructure/architecture

   (b) work experience relating to network infrastructure/architecture, remote access systems, Internet connectivity and support services

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. knowledge of computer network infrastructure/architecture

2. knowledge of data remote access systems

3. knowledge of Internet connectivity and support services

4. ability to follow directions and complete assignments independently

5. ability to apply technical knowledge on a practical level

6. ability to communicate network applicability to technical support staff

Level II: Network Engineer II 1388

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. possession of credentials required for Network Engineer I

and

   (a) 2 additional years of work experience relating to network infrastructure/architecture, remote access systems, and Internet connectivity and support services

or

(b) Master's degree in related technical field or general managerial field

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. knowledge of computer network infrastructure/architecture
2. knowledge of data remote access systems
3. knowledge of Internet connectivity and support services
4. ability to follow directions and complete assignments independently
5. ability to apply technical knowledge on a practical level
6. ability to communicate network applicability to technical support staff

Level III: Network Engineer III 1389

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. possession of credentials required for Network Engineer II
2. 2 additional years of work experience relating to network infrastructure/architecture, remote access systems, and Internet connectivity and support services

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. advanced knowledge of network architecture and design
2. ability to assess network efficiencies and make adjustments/recommendations for improvement

Level IV: Network Engineer IV 1390

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. possession of credentials required for Network Engineer III
2. 2 additional years of work experience relating to network infrastructure/architecture, remote access systems, and Internet connectivity and support services

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. advanced knowledge of network architecture and design
2. ability to coordinate efforts of lower level staff

3. ability to manage projects independently

4. ability to assess network efficiencies and make adjustments/recommendations for improvement

Level V: Network Engineer V 1391

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. possession of credentials required for Network Engineer IV

2. 2 additional years of work experience relating to network infrastructure/architecture, remote access systems, and Internet connectivity and support services

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. expert knowledge of network architectures and design

2. ability to provide supervision to lower level staff

3. ability to manage projects independently

4. ability to solve technical as well as personnel problems and communicate independently with affected parties

5. ability to assess network efficiencies and make adjustments/recommendations for improvement